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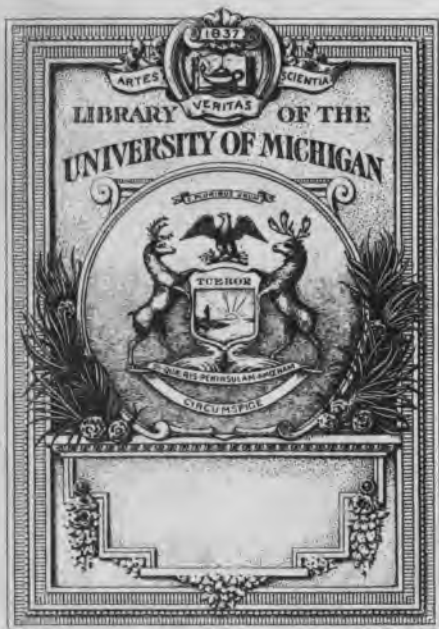
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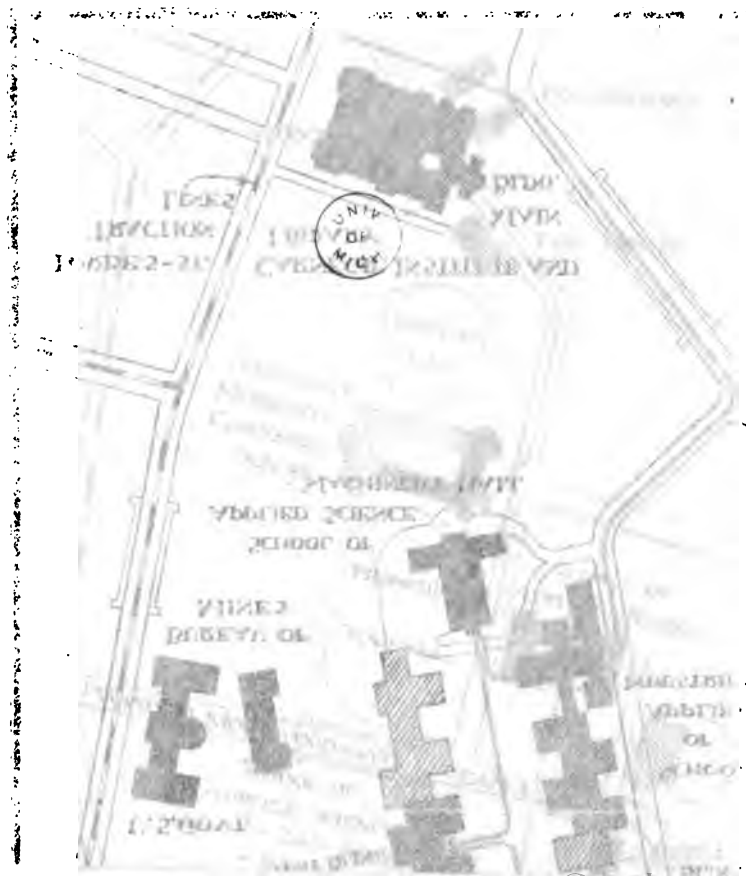
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Pittsburgh Carnegie Inst. - ... Guide...



THE GIFT OF
Mr. W. W. Bishop

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**SCHENLEY PARK ENTRANCE TO THE CARNEGIE INSTITUTE OF TECHNOLOGY.
SHOWING MACHINERY HALL AND "THE TOWER."**

Pittsburgh Carnegie Institute

**OFFICIAL GUIDE
TO THE
CARNEGIE INSTITUTE
OF TECHNOLOGY**



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Introductory Note



THE Carnegie Institute of Technology is open to visitors throughout the year from 9:00 A. M. to 5:00 P. M., with the exception of holidays and Sundays. Classes are in session five days a week from 8:30 A. M. to 4:30 P. M. from about the middle of September to the middle of June. An interesting time to make a trip through the buildings is during the evening, between 7:30 and 9:30, when the large body of night students is at work. The night school is in operation from the first of October to the first of May.

Visitors can inspect the various departments without special permission; those who prefer to have a guide can secure one, without expense, at the Secretary's Office in the Central Building.

To reach the Carnegie Institute of Technology from the downtown business section, one should take any car going out Forbes Street, and get off, after a run of about twenty minutes, at the Carnegie Institute. The main building of the Institute, located directly on Forbes Street, contains the Carnegie Library, Art Galleries, Museum, and Music and Lecture Halls, which are described on pages 41 to 46. By taking the walk to the right of this building, continuing to the left over the bridge which spans the Baltimore and Ohio Railroad, and still continuing to the left after entering Schenley Park, the buildings of the Institute of Technology are reached—a seven minute walk.

It will be seen from the accompanying map that a continuous route has been indicated in red as a guide from one building to another. This, with the asterisks which signify places within the buildings that are likely to interest the average visitor, should assist those who may wish to include the maximum of what is best worth seeing, with the minimum effort.

It will also be seen from the map that by leaving the Campus at its east end, and going out Woodlawn Avenue, the Forbes Street cars again become available, at a distance of about three-quarters of a mile from the point where one left them.

Visitors whose first objective is the School of Applied Design or the Margaret Morrison Carnegie School, should take the Forbes Street car to Woodlawn Avenue, instead of getting off at the main building of the Institute.

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SCHENLEY PARK VIEW OF THE INSTITUTE OF TECHNOLOGY

Carnegie Institute of Technology

THE HISTORY OF THE FOUNDATION



THE existence of the Carnegie Institute of Technology dates from a letter written by Andrew Carnegie to the Mayor of Pittsburgh on November 15, 1900.

The city, which had its origin about 1749 as an Iroquois Indian settlement called "Shannopin's Town," and which adopted on November 26, 1758, a name that should honor the great British prime minister and friend of the American colonies, Sir William Pitt, had become, at the beginning of the twentieth century, a notable center of colossal industries. As such, it had exceptional need for technical and industrial training.

When Pittsburgh, in 1900, was about to consider the appropriation of \$100,000 with which to begin a technical school, the opportunity presented itself for Mr. Carnegie to make what has since proved one of his most memorable gifts. He offered the funds to found a technical institute, on the condition that the City of Pittsburgh should provide a suitable location, and he concluded his letter with

the assurance that "my heart is in the work." These words have since been given permanent significance by being embodied in the official seal of the institution.

Pittsburgh accepted Mr. Carnegie's tender on January 28th, 1901. The year of 1902 was spent in selecting a site; and in February, 1903, a tract of 32 acres adjoining Schenley Park was acquired by the city, and deeded to the trustees who had undertaken the task of bringing the "Carnegie Technical Schools" into being.

The determination of what Pittsburgh needed in the field of technical education consumed the remainder of the year. The Trustees' Committee on Plan and Scope, consisted of William McConway, John A. Brashear, W. J. Diehl, W. A. McKee, and Charles M. Schwab. An advisory committee of experts was appointed consisting of four members, but as its report was not approved, a subsequent advisory committee of three members was appointed, consisting of Arthur A. Hamerschlag, Clifford B. Connelley and Arthur L. Williston. The recommendations of this committee were accepted by the trustees. On November 10, 1903, Mr. Hamerschlag was appointed Director of the Carnegie Technical Schools.

The year of 1904 was spent in the preparation of the architectural plans. On April 3, 1905, ground was broken for the first group of buildings, now occupied by the School of Applied Industries. Six months later, when the doors were opened on October 16th, students were admitted up to the capacity of the one building then available for use, 120 in number, although 7029 applications and



THE FIRST BUILDING AS IT APPEARED ON THE OPENING DAY, OCTOBER 16, 1905



THE WEST END OF THE CAMPUS IN 1915

inquiries had been received. This first group consisted of engineering students only. By the end of the first year, 1905-06, the original three units in the building program had been completed, architectural and industrial courses had been started, and 765 students were enrolled. New courses were added as more space became available.

THE GROWTH OF THE FIRST DECADE

The demands upon the Schools for technical education immediately became so considerable as to make early and frequent extensions necessary; and the Founder, in consequence, has provided funds, as needed, for new buildings, equipment, and endowment, until his original gift of \$1,000,000 has grown to a present investment of approximately \$13,500,000.

In the ten years from 1905 to 1915 twelve buildings have been erected, being relatively placed so as to form a quadrangle. The map at the front of the book shows the proposed buildings.

In June, 1908, the first diplomas, 58 in number, were awarded to graduates in chemical, civil, electrical, mechanical, and metallurgical engineering, and in architecture.

On April 20, 1912, the name "Carnegie Technical Schools" was officially changed to the "Carnegie Institute of Technology"; and the institution received from the State of Pennsylvania a charter of incorporation, with the power to confer degrees. The first degrees were conferred upon the occasion of the fifth Commencement, in June, 1912.

The history of the first decade, under Director Hamerschlag's administration, can be condensed into a table of statistics that will serve to give the mind quickly some conception of the growth.

	1905-06	1914-15
Number of students.....	765	3223*
Faculty.....	61	205
Graduates.....	00	1408
Number of Departments.....	12	32
Number of Buildings.....	2	12
Annual Expenditures.....	\$ 72,540	\$ 603,320
Endowment.....	2,000,000	9,000,000
Grounds.....	350,000	350,000
Buildings.....	800,000	3,500,000
Equipment.....	60,000	800,000

THE CARNEGIE TYPE OF EDUCATION

In these days of many colleges of many types it is not surprising that some uncertainty should exist in the public mind as to the specific purpose for which any particular institution may stand. The Carnegie Institute of Technology is primarily concerned with technical education, grouping its work into four main divisions, (1) courses in engineering for men, (2) courses in the fine and applied arts for both men and women, (3) industrial courses for men, and (4) courses for women which combine training for the home and for a profession. The Institute consists of four separate schools, each with its own faculty, buildings, and students, and each giving both day and night instruction.

1. School of Applied Science—the engineering college.
2. School of Applied Design—the art school.
3. School of Applied Industries—the industrial school.
4. Margaret Morrison Carnegie School—the college for women.

The buildings and courses of these four schools are described on succeeding pages. The School of Applied Industries is the first group of buildings reached by the visitor, following the route indicated in red on the map at the front of the book.

*As this guide-book goes to press, November 1, 1915, the registration for the year 1915-16 is 3432.



SCHOOL OF APPLIED INDUSTRIES

CONTAINS THE DEPARTMENTS OF MACHINE CONSTRUCTION, BUILDING CONSTRUCTION, GENERAL EQUIPMENT AND INSTALLATION, AND PRINTING

School of Applied Industries

GUIDE TO BUILDINGS



BUILDINGS A, B and C, connected, were the first three units erected in the architectural program of the Carnegie Institute of Technology. Constructed in 1905-06; cost \$800,000. Building A was the only one ready for occupancy when the first class of 120 students registered and entered, on October 16, 1905.

During the years of 1905-06 and 1906-07 the work of all four schools was conducted in Buildings A, B and C. In September 1907, the Margaret Morrison Carnegie School was finished, and the courses for women transferred to it. On the completion, in December, 1908, of the East and West Science Buildings, the first two in the group for the School of Applied Science, the engineering faculty and students moved. When the art courses were installed in the new

School of Applied Design, in September, 1912, the original three buildings, A, B and C, were then available, as originally planned, for the exclusive use of the School of Applied Industries, which was known from 1905 to 1910 as the School for Apprentices and Journeymen. The directory of the buildings in the Industries group follows:

Basement Floor. Contains the *forge shop, *foundry, building construction drawing room, student club-room, and a sales-room conducted by the Institute where students secure books and supplies at discount prices.

First Floor. *Machine shop, dean's office, assembly hall, structural drawing room, *electrical equipment laboratory, *sheet, cornice and art metal shop, offices of the department of student health, and *printing shop. The department of printing has the distinction of being the apprenticeship school of the United Typothetae and Franklin Clubs of America, organizations of the master-printers of the United States.

Second Floor. *Electric-wiring shop, *pattern shop, mechanical drawing room, *plumbing shop, *carpentry and *manual training shop, and *laboratory for psychology.

Third Floor. Mechanical drawing-room, and laboratories for the chemistry of materials, mechanism and physics.

Nothing that is produced in the shops is offered for sale. The articles made are used in other departments for purposes of instruction, or reduced to stock.

COURSES OF INSTRUCTION

The School of Applied Industries gives instruction to five groups of students:

First. A course for the training of industrial and manual teachers, primarily adapted for graduates from the manual or industrial high schools, and for men of matured experience, who can give four years to securing the necessary preparation to equip them (a) to teach the ordinary academic subjects, (b) to take charge of departments in manual training and industrial schools, or (c) become instructors of apprentices in large manufacturing establishments. This course leads to the degree of Bachelor of Science in Industrial Education. Holders of this degree receive a provisional college certificate from the State Department of Public Instruction, which entitles them to teach in the public schools, without taking examinations.

Second. Regular three-year day industrial courses in (a) machine construction, (b) building construction, (c) general equip-

ment and installation, (d) printing, for those who desire a broad industrial education equipping them to become foremen, inspectors, assistant master-mechanics, assistant superintendents, etc., in the manufacturing, building, and printing trade industries. For admission to these courses an applicant must have had some high school work, or several years of satisfactory practical experience in one of the trades.

Third. Short intensive day trade courses of one year, in which instruction in a single trade is given for those who are mature enough and have had experience enough to profit by the work. These courses are particularly advantageous to young men who, having served the larger portion of their apprenticeship, wish to enter the field of skilled workmen with more training than the shop generally gives to the average apprentice. The courses offered are machine shop, pattern making, mechanical drawing, electric wiring, plumbing, bricklaying, forging, and foundry.

Fourth. Night trade courses of three evenings a week from 7:30 to 9:30 for men already engaged in the trades, or those having an opportunity to enter them, who need a more thorough course than can be secured in their daily work, and who wish to combine up-to-date practice with theory, and thus increase their efficiency and earning power.

Fifth. A Night Preparatory course for those who wish to meet later the requirements for admission to the regular night courses of the Schools of Applied Science and Design.

TUITION FEES

The total fees for a day course for the school year, from the middle of September to the middle of June, are \$38.00 for a resident of Pittsburgh, and \$48.00 for a non-resident. The fees for a night course, from the first of October to the first of May, are \$16.00 for residents, and \$18.00 for all others.

STUDENT REGISTRATION

For the year 1915-16, 370 day students are enrolled in the School of Applied Industries, and 1002 night students, total 1372.



MACHINERY HALL OF THE SCHOOL OF APPLIED SCIENCE
CONTAINS THE DEPARTMENTS OF ELECTRICAL AND MECHANICAL ENGINEERING

School of Applied Science

GUIDE TO BUILDINGS—MACHINERY HALL



MACHINERY Hall is the building with the tower, located at the extreme west end of the campus. Built 1912-13; cost, \$518,000. Contains the departments of mechanical and electrical engineering, and the power plant for the entire institution.

Sub-basement. Contains the stationary engineering laboratory. The boiler room and laundry of the Institute are below the sub-basement.

Basement. Laboratories for *mechanical engineering and the *testing of materials, and the engine room of the Institute.

Mezzanine Floor. *Electrical machinery laboratories, including motors, generators, and street railways and high tension equipment; also rooms for mechanics and instruments.

First Floor. Dean's office, class-rooms, electrical testing rooms, and offices of the mechanical and electrical engineering departments.

Second Floor. Electrical measurements and computing rooms mechanical drafting-rooms, and faculty club-rooms.

Third Floor. Photo-stat and storage battery rooms.

Tower. In the tower has been installed a well-equipped radio-telegraphy *plant, one of the most powerful wireless stations in the Middle West. The receiving range extends as far west as Honolulu and as far east as Germany, and the sending radius from all stations east of the Rocky Mountains to those aboard ships on the Atlantic Ocean. The plant was installed for the Student Radio Club, an organization of electrical students, and is being used by them for practical and experimental purposes. The principal components of the apparatus are a 10-kilowatt, 500-cycle alternator or generator, a 10-kilowatt transformer, several receivers, and an audion detector, a new device which makes reception from long distances possible. The aerial consists of four heavy silica-bronze wires which are 207 feet above the ground and stretch a distance of 700 feet, from the top of the great chimney of the power house of the Carnegie Institute to the Machinery Hall tower on the campus.

Visitors may be interested to notice that the tower is an architectural feature, masking the chimney of the power plant.

SCIENCE BUILDINGS—EAST AND WEST

The East and West Science Buildings are the two connected structures on the north side of the campus. Erected in 1907-08; cost, \$790,000. Contain the departments of chemical, civil, commercial, metallurgical, mining, and sanitary engineering, and the departments of languages, mathematics, physics, mechanics, and machine design.

Sub-basement. Laboratories for *electric furnaces, *ore dressing, *assaying, metallography, micro-photographic work, of the department of metallurgical and mining engineering; also the *hydraulics laboratory, and drafting and instrument rooms of the department of civil engineering.

Basement or Entrance Floor. Laboratories for geology and mineralogy, and offices of the department of metallurgical and mining engineering; the sanitary engineering laboratory; *structural drafting-rooms; and offices of the department of civil engineering; class-rooms and office of the department of languages; and student club-rooms.

First Floor. *Heat, light, and photo-metric laboratories; and offices of the department of physics; *drafting-rooms and offices of the department of machine design; also class-rooms and offices for the departments of English and mechanics.

Second Floor. Laboratories for freshman *physics and *chemistry; demonstration lecture rooms; class-rooms and offices for the department of mathematics.

Third Floor. Laboratories for analytical, physical and theoretical chemistry; statistics laboratory, class-rooms and offices of the department of commercial engineering.

COURSES OF INSTRUCTION

The School of Applied Science gives courses in preparation for service in any one of the following engineering professions: They require four years of resident study in Pittsburgh, and lead to the degree of Bachelor of Science.

1. CHEMICAL ENGINEERING
 - a Industrial Chemical Engineering
 - b Electrochemical Engineering
2. COMMERCIAL ENGINEERING
3. CIVIL ENGINEERING
4. ELECTRICAL ENGINEERING
5. MECHANICAL ENGINEERING
6. METALLURGICAL ENGINEERING
 - a {Metallurgy of Iron and Steel
 - {Metallurgy of Non-ferrous Metals
 - b {Electrometallurgy
7. MINING ENGINEERING
 - a Coal Mining
 - b Metal Mining
8. SANITARY ENGINEERING
9. GENERAL SCIENCE
10. TRAINING OF TEACHERS IN SCIENCE

For admission to the School of Applied Science a student must present a certificate of graduation from an approved four-year high or preparatory school, or an equivalent training through experience in practical work of a technical nature. In addition, there is a personal interview requirement, and entrance examinations in certain subjects fundamental to an engineering course. Candidates whose certificates show that they are exceptionally well prepared are granted exemption from examinations.

The work of the first year is the same for all students, irrespective of the courses of study they may prefer prior to entrance, the time being devoted to instruction in those studies which form the basis of technical education. On the completion of the first year,

the student, in consultation with the Faculty, chooses one of the eight engineering courses offered. Care is taken to acquaint him with the fields of the various engineering professions, and to direct him toward that line of work for which he has shown the greatest aptitude.

After the completion of the preliminary training common to all courses, the work of the student is gradually concentrated upon preparation for a particular engineering profession. Certain funda-



EAST AND WEST SCIENCE BUILDINGS

CONTAIN THE DEPARTMENTS OF CHEMICAL, CIVIL, COMMERCIAL, METALLURGICAL, MINING, AND SANITARY ENGINEERING

mental studies, such as mathematics and physics, are continued, and each year provides instruction in a group of non-technical subjects, designed to stimulate the faculties of the student and to broaden his intellectual training; but an increasingly large proportion of the time is given to the subjects having a direct bearing upon the practice of the particular branch of the profession he has chosen.

In the technical subjects, the student is placed under the immediate instruction of men who have had practical experience in the

industrial world and who are familiar with the methods prevailing in the modern practice of engineering. Unless circumstances make it impossible, every student is expected to devote his summers to practical work in his chosen branch of engineering.

Night Courses. Regular courses leading to a diploma are offered in the Night School in the different branches of engineering. For each course a definite schedule is arranged which require attendance for from nine to twelve hours a week for a period of five years. The aim of the regular night courses is to give men who are engaged in technical work the instruction necessary to equip them for engineering work.

The more limited number of hours available in the night courses makes it impossible to give all the subjects of instruction offered in the day courses. The fact that the student is engaged in daily work which involves the application of the theoretical instruction of the class-room compensates to some extent, however, for the shortening of the courses.

In addition to the regular five year courses, students who have the requisite preparation are admitted for special work in one or more subjects, which does not lead to the diploma. The night instruction is given by members of the regular Faculty, and under the same general conditions as in the Day School.

TUITION FEES

The total fees for a day course for the college year, from the middle of September to the middle of June, are \$48.00 for a resident of Pittsburgh, and \$58.00 for a non-resident. The fees for a night course, from the first of October to the first of May, are \$16.00 for residents, and \$18.00 for all others.

STUDENT REGISTRATION

For the year 1915-16, 565 day students are enrolled in the School of Applied Science, and 345 night students; total, 910.



CENTRAL BUILDING

Erected in 1914. Cost, \$118,000. In use temporarily for the administrative offices of the Institute of Technology.

First Floor. Offices of the Secretary, Registrar, Supervisor of Equipment, Cashier, Accountant, Purchasing Agent, Bureau of Recommendations, and the Institute Post-Office.

Second Floor. Offices of the Director; Record Room; and laboratory, class-room and office of the department of pedagogy and psychology.

Third Floor. The *Carnegie Union, 87 x 50 feet, a club-room for the students, with facilities for reading, games, etc.

Basement. Contains the student restaurant, conducted cafeteria style. Three meals a day during the week, and two on Sunday are served at the rate of fifty cents a day. These meals are carefully selected and balanced, to meet the needs of growing students. The restaurant is operated on a no-profit basis, the Institute assuming all the overhead expenses. The restaurant was installed by the Institute for the special purpose of controlling as much as possible the very important factor of food in relation to health.

Visitors finding themselves on the campus at the lunch hour can be assured of service in the restaurant.

School of Applied Design

GUIDE TO BUILDING



LOCATED on the crest of the campus. The central portion of the building was completed and occupied in September, 1912; the two wings, now under construction, will be finished in January, 1916. Cost \$850,000.

The predominant architectural motive in the design and construction of this building was the thought that the best way to teach a knowledge and an appreciation of art is to let a student see, in his immediate environment, to what degree of excellence art itself can attain; hence, the Design School represents the most important architectural contribution to the campus.

The front facade gives prominence to five niches which are to be sculptured to represent the five great periods of architectural history. From left to right these will be Gothic, Greek, Roman, Renaissance and Moorish. The Renaissance niche, the only one started, but still uncompleted, was done by an Italian craftsman, Grammartini, who spent a year at the work. The designs for these architectural features, being intricate, will probably require ten years for their execution. The niches bear no relation to the titles above, which indicate the arts housed within, Painting, Sculpture, Architecture, Music, and Drama.

First Floor. The main entrance to the building is through the centre niche. The visitor finds himself at once in a large and impressive foyer of limestone, with a high arched ceiling. *Unique and interesting is the use of the ground plan of St. Peter's Cathedral in Rome as a decorative motive inlaid in the floor.

At the right of the foyer are the three entrances to the *theatre, which is regarded as the workshop or laboratory of the department of dramatic arts. The seating capacity is 450. The concave steel curtain preserves the form of the room, which is elliptical in shape. The wood-work of natural oak is beautifully designed and the carving charming in detail. The large stained-glass skylight provides a soft but abundant light, and contributes to make this theatre the most notable room in the Institute buildings. Over the proscenium appear the words "Ici L'Inspiration Deploye ses Ailes" (Here Inspiration Unfurls Its Wings.)

Seven panels are the principal decorative features of the theatre, designed and painted by James Monroe Hewlett, Charles Basing, and Arthur T. Hewlett, of New York.



SCHOOL OF APPLIED DESIGN

CONTAINS THE DEPARTMENTS OF ARCHITECTURE, PAINTING AND DECORATION,
MUSIC, DRAMATIC ARTS, AND SCULPTURE

The subject of the large central panel is Rome. At the left of this are three smaller panels illustrative of Egypt, Assyria and Greece, and on the right three illustrative of Byzantium, the Middle Ages and the Renaissance. The selection of Rome for the center and largest panel is due, not merely to its chronological position, but especially to its significance as forming the connecting link between ancient and modern art.

The architectural and sculptural fragments which have been selected for these compositions as particularly representative of their periods are as follows:

1. **EGYPT.** The base contains a relief portrait from the Temple of Seti I at Abydos. Above this is a small seated figure of Neferhotep, back of which rises a colossal standing figure of Nefertari, favorite wife of Rameses II from the Temple at Luxor. In the background is a fragment of the colonnade of the Temple at Edfou and a glimpse of the Kriosphinx in the Temple at Karnak.

2. **ASSYRIA.** The base represents a relief of the Palace at Persepolis, back of which appears one of the winged human headed bulls from the portal at Khorsabad, and the archers from the Palace of Nimrod at Babylon. The columns in the background are from the Palace at Persepolis.

3. **GREECE.** The base of this composition is a portion of the frieze of Bacchantes now in the Museum at Naples. Above this a full relief figure of Libera is silhouetted against the relief of a horseman from the Tomb of Dexileos in the Dipylon at Athens, back of which rises a fragment of the order of the Parthenon.

4. *ROME.* The base of this composition consists of a fragment of a tomb from the Villa Albani, a portion of the frieze of the Tomb of Cecelia Metella, the Roman Eagle and wreath now in the portico of the Church of S. S. Apostoli and a panel from the arch of Marcus Aurelius. In the middle ground from left to right are one of the "Horses of Phidias," a bronze wolf of the Vatican, a restoration of the prow of a Roman Galley and a Victory found at Cornezzano. The sculptured base behind the horse of Phidias is from the Tomb of the Emperor Severus. At the right hand side of the composition appears a fragment of the arch of Constantine, back of which extends a colonnade of the Corinthian Order from the Temple of Vesta, Rome, and back of this again a faint outline of a Roman dome closes the vista.

5. *BYZANTIUM.* As this period also includes the so-called Romanesque Period in France and Italy, the fragments included in the composition are a figure from St. Mark's at Venice, an ancient Byzantine Sarcophagus now in the Riccardi Palace at Florence and a portion of an arcade from the Church of St. Guillem Le Desert in Languedoc.

6. *THE MIDDLE AGES.* Above a sculptured base from the Cathedral of Salamanca is placed one of the sculptured columns from the south porch of Chartres Cathedral. The gargoyle in the foreground is from Amiens Cathedral.

7. *THE RENAISSANCE.* The base represents a relief by Luca della Robbia, surmounted by Michael Angelo's figure of "Night" from the Tomb of Guiliamo di Medici, San Lorenzo, Florence, back of which appears Donatello's St. George, from the Church of San Michele, Florence, against a sculptured arch by Benedetto at Spoleto. At the extreme right of the composition above the Michael Angelo figure appears the cartouche from the corner of the Cancelleria Palace in Rome.

To return to the foyer, the three entrances on the left lead to a *large hall used for concerts by the symphony orchestra of the department of music (60 pieces) and for exhibitions and judgments by the departments of architecture, painting and decoration. The walls are occupied most of the time by student work done in competitions connected with the numerous design problems assigned by the different departments.

At the rear of the foyer, ascending a short flight of stairs, the visitor passes other exhibition rooms, and comes upon a large, transverse corridor, with the Dean's office directly in front of him. Around the entrance is a replica of the door of Hotel de Ville, at Toulon, France, executed by Pujet, seventeenth century.

To the right and left of the Dean's Office are class and lecture rooms. In the left wing, on the first floor, is the library and reading room of the Design School; in the right wing are the rehearsal, property, class and green-rooms, and the offices of the department of dramatic arts.

The three plans inlaid in the floor of the main corridor are: *Right*, Parthenon at Athens (Greek); *Center*, Cathedral, Chartres, France, (Gothic); *Left*, Temple of Edfu, Egypt (Egyptian). The large candelabras at either end of the corridor are copies of the *Torcheres en plomb* in the Park of Versailles, France.

Mezzanine Floor. Contains the practice and teaching rooms for the department of music; also the scene-painting and dressing-rooms for the department of dramatic arts.

Second Floor. Devoted entirely to the department of architecture. Contains the *main drafting-room with table space for 200 students. In the left and right wings are additional drafting rooms and class-rooms, and offices.

Third Floor. Devoted entirely to the department of painting and decoration. Contains *skylighted studios for drawing and painting from life, cast, and still life, and a large design room for those taking the courses in decoration, illustration and normal art.



FOYER OF THE SCHOOL OF APPLIED DESIGN

In the left and right wings are additional studios and drafting rooms, and the offices.

Fourth Floor. Private studios for members of the faculty, and two loge rooms with 70 loges. In these loges the architectural students make the preliminary sketches for their competitive designs. Five to twenty-four continuous hours are allowed for the making of

the sketches, and the student is not permitted to leave his logs until the sketch is finished.

Basement. Contains studios for modeling and sculpture, and locker, storage, and property rooms.

COURSES OF INSTRUCTION

The diploma of the School, with the degree of Bachelor of Arts, is conferred on students who complete the regular courses. The diploma stands for a certain standard of professional attainments, and requires resident study of at least four years. For admission, a candidate must present a certificate of graduation from a four-year high or preparatory school or its equivalent. The following courses are given:

Architecture. The work of Architecture is projected to give the student a thorough training in those fundamental principles of design and construction which are most necessary to the practicing architect. Many of the subjects in the course provide for that liberal mental training which is as necessary to the successful practitioner as is his purely technical equipment. An option in construction design is offered to students who wish to specialize their work in this direction rather than in architectural design.

A number of important architectural competitions are open to students of this department. Of these, the principal ones are *The Paris Prize* of \$2,500 which provides for two and a half years of foreign travel and study, and *The Stewardson Traveling Scholarship* of \$1,000, offered annually to students of one year's residence in Pennsylvania.

Painting and Decoration. Open to both men and women. The following options are offered in this department: Illustration, Decoration, Painting and Normal Art. Special courses are offered at night in stained glass and furniture design.

These courses are intended to give the student thorough training in drawing, painting and design; to teach him to observe and render accurately; to give him facility in composition, and to put him in possession of the technical ability necessary for work in the various branches of the pictorial and decorative arts. Instruction in drawing and painting from the antique and from life is regarded as fundamental to the best results, but care is taken to avoid rigid methods which would hamper the individuality of the student. It is assumed that all artistic development must be personal, but that the student can most easily acquire aesthetic appreciation and capacity for

creative work through instruction based on correct principles of drawing, painting, and composition.

Music. Open to both men and women. The department of music aims to give the student the solid foundation of a liberal arts course, with specialization in such subjects as harmony, counterpoint, acoustics, and history of music, accompanied by work in technique for solo or ensemble performance on piano, organ, strings, and all other instruments of the orchestra. Vocal courses, and courses for teachers, musical critics, conductors, and composers will be added as the department extends its scope.

Dramatic Arts. Open to both men and women. The work of the department is planned to give the student a general knowledge of the technic of the drama, approaching it by literary and historical courses, as well as through a strong training in direct technical work. The work in the third and fourth years of the course allows the student to specialize in acting, in stage decoration and scene design, in dramatic literature, composition or criticism, in costume, or in the general work of production.

Public performances of classical plays as well as modern dramas are frequently given by the students, the making of the scenery and the costumes being considered as much a part of the exercise as acting. Visiting instructors, actors, producers, and dramatists, are called in from time to time, so that the students may obtain experience under different styles of direction.

Night Courses. Night classes are scheduled in the major subjects of all departments.

TUITION AND OTHER FEES

The total fees for a day course, from the middle of September to the middle of June, are \$43 a year for residents of Pittsburgh, and \$53 for non-residents. The fees for a night course, of the same period as above, are \$16 for residents, and \$18 for all others.

STUDENT REGISTRATION

For the year 1915-16, 340 day students are registered in the School of Applied Design, and 216 night students, total 556.

Margaret Morrison Carnegie School

GENERAL STATEMENT



HE Margaret Morrison Carnegie School, the college for women, named after the Founder's mother, devotes itself to the education and training of women, not only for the home but also along specific technical lines. It is located at the east end of the campus. The original building was erected in 1906-07, and the west wing in 1914. Cost \$498,000. Upon the entrance court are inscribed these words:

To Make and Inspire the Home;
 To Lessen Suffering and Increase Happiness,
 To Aid Mankind in Its Upward Struggles;
 To Ennoble and Adorn Life's Work, However Humble—
 These are Woman's High Prerogatives.

—W. Lucien Scaife.

Towards the realization of this ideal, the school offers an education of college rank in which the point of view of the student is shaped in relation to her duties, opportunities, and responsibilities as a woman in the home and family, in the community, and in the state. A curriculum, which includes subjects directly bearing on domestic life, subjects usually called purely cultural, and subjects strictly technical for one of the vocations peculiarly suited to women, is designed to fit the student for a well-balanced life, and also for a profession, should wish to enter one. The professional aim is necessarily made more prominent during the later years of the course.

For admission, a candidate must present a certificate of graduation from a satisfactory four-year public high or private preparatory school, or its equivalent in practical training and experience.

COURSES OF INSTRUCTION

The regular courses require four years of resident study, and lead to the degree of Bachelor of Science. Six different courses are offered, as follows:

- | | |
|-------------------------|--------------------------|
| 1. Household Economics. | 4. Home Arts and Crafts. |
| 2. Secretarial Studies. | 5. Social Work. |
| 3. Costume Economics. | 6. General Science. |

Teachers' courses in all of the above subjects are also offered, with the exception of social work.



MARGARET MORRISON CARNEGIE SCHOOL FOR WOMEN
CONTAINS THE DEPARTMENTS OF HOUSEHOLD ECONOMICS, SECRETARIAL
STUDIES, COSTUME ECONOMICS, HOME ARTS AND CRAFTS, AND SOCIAL WORK

The scope of the work in the day courses may be indicated by a partial list of typical positions held by graduates: (1) teachers in high or normal schools, and in other schools, of such subjects as domestic science, sewing and dressmaking, commercial studies, chemistry, and arts and crafts; (2) hospital dietitians, lunch and tea-room managers, organizing housekeepers; (3) business and secretarial positions of varied sorts; (4) laboratory research assistants in medical, municipal, and educational lines; (5) supervisors of art; (6) dressmakers; (7) social workers and organizers; (8) directors of playgrounds; (9) craft-workers.

Young women who have received a bachelor's degree in liberal arts, and who wish to add a technical training to their equipment, may enroll themselves in a one or two-years course for a bachelor of science degree. Special intensive technical work is arranged for such students.

Night courses are offered in bookkeeping, shorthand and typewriting, sewing and dressmaking, cooking, and handicrafts; and in continuation work for teachers. Certain courses in the night school are credited toward the bachelor's degree.

GUIDE TO BUILDING

Basement. *Studio for jewelry, of the department of home arts and crafts. Lecture room and *laboratories for biology, bacteriology, physics, and chemistry, and offices of the department of science. Matron's rooms. Locker and dressing rooms.

First Floor. General Office, Dean's Office, faculty-rooms, assembly hall, student's reading-room, offices and class-rooms of the department of general studies, and of social work. In the largest of the faculty-rooms hangs a portrait of the Founders' mother, Mrs. William Carnegie.

Second Floor. *Studios for weaving, lace-making, basketry, leather-work, book-binding and designing, and offices of the department of home arts and crafts. Three *studios for sewing, dress-making and embroidery, one for millinery, one for costume design, an exhibition room, and the offices of the department of costume economics. Consulting room of the resident physician.

Third Floor. *Four instructional kitchens, practice dining-room, and offices of the department of household economics. *Class-rooms in shorthand, typewriting, business methods, and bookkeeping, a model office, a miniature bank, and offices of the department of secretarial studies. Large hall for recreation and social life for the students.

Fourth Floor. *Model apartment consisting of six rooms and bath, completely furnished as if for a family, and provided with linen, table-ware, kitchen and laundry utensils, and stores for house-keeping. Students who specialize in household economics live in this department for short periods under the supervision of an instructor, and put in practice their knowledge of dietetics, cooking, serving, buying, laundering, cleaning, and the general scientific care of the household.

On the fourth floor are also located the *gymnasium, examinations, locker, bath and dressing rooms of the department of physical education, a large lunchroom for students, and a small one for the faculty.

TUITION FEES

The total fees for day courses for the college year, from about the middle of September to the middle of June, are \$33 for a resident of Pittsburgh, and \$43 for a non-resident. The fees for a night course, from the first of October to the first of May, are \$8.50 for residents, and \$10.50 for all others.

STUDENT REGISTRATION

For the year 1915-16, 272 day students are registered in the Margaret Morrison Carnegie School, and 180 night students, total 452.



MR. CARNEGIE AND DIRECTOR HAMERSCHLAG ON THE CAMPUS

General Information

CAMP LOUISE CARNEGIE

THE Institute operates, as part of its work, Camp Louise Carnegie, which is situated near Pittsburgh, on the Allegheny River. It is a 750-acre engineering camp where students in certain courses are stationed for their field work during the summer. The large mansion house on the property and a colony of tents provide suitable instructional and living quarters. The camp is reached in fifty minutes by the Allegheny Valley Division of the Pennsylvania Railroad, the station "Glencairn" being on the property. Fare, 60c each way.

INSPECTION VISITS

On account of its extensive and varied industries, Pittsburgh provides exceptional opportunities for the observation of technical processes on a large scale. Taking advantage of this favorable condition, the Schools of Applied Science and Industries schedule their

students for frequent inspection visits to the various furnaces, mills, factories, railroad terminals, structural plants, cement works, and other points of interest. The work between semesters, the last week in January, is devoted entirely to these observation trips under faculty supervision, and attendance and written reports are required of the students.

Students in the Margaret Morrison Carnegie School who are specializing in institutional housekeeping, sanitation, and the like, make frequent inspection visits to hotels, hospitals, and other large institutions. Business observation trips are arranged for those taking secretarial studies.

CARNEGIE TARTAN

The tartan of the Carnegie clan, blue, red, green and yellow, is the official color of the Carnegie Institute of Technology; in addition, each of the four schools has adopted one of the tartan colors—blue for Science, red for Design, green for Industries, and yellow for the Margaret Morrison Carnegie School.

DORMITORIES

Dormitories for Men. Two dormitories for men are operated by the Institute. They are of brick and stone construction, fire-proof, electrically lighted and steam heated; cost, including land and equipment, \$104,000. Both contain club-rooms, and on each floor is an out-door sleeping porch for optional use. They are conveniently located with respect to the campus, on Woodlawn avenue opposite the Athletic Field House, and provide the advantages that are essential to community life among the undergraduates. Single rooms, average size 8' x 14', rent for \$90.00 per college year, and double rooms, average size 12' x 14', for \$136. and \$150. These charges include light, heat, service and all bedding, except blankets, but do not include meals, which are secured at the restaurant in the Central Building. Adequate bathing and toilet facilities are provided for each building. The rooms are furnished with bed, chifforobe, table, chairs and rugs.

Dormitories for Women. The Institute also maintains three dormitories for women, located in the desirable residential section. The rooms, single, double and triple, are furnished with rug, curtains, 36" cot, mattress and pillow, dresser or chiffonier, study table and chairs. The following terms include room, with light and heat, and three meals per day: Single rooms \$315 per college year, double rooms \$279 and triple rooms \$261. Each dormitory has as chaperone a resident faculty representative, and a matron.

Private Houses. Students also find accommodations in private houses in the vicinity of the Institute. Furnished rooms with board can be secured for \$5.50 a week upward, the cost of lodging being reduced, of course, when men room together. These houses are annually investigated and approved by an official of the Institute. Several fraternity and club houses near the campus provide quarters for additional groups of students.

ATHLETIC FIELD HOUSE

The Field House, located at the extreme east end of the campus, is a building 107 feet long by 46 feet wide, and contains a gymnasium 90 feet long by 43 feet wide by 22 feet high, equipped with a complement of gymnasium appliances. This equipment provides what is necessary for the students to keep themselves in the best physical condition, and carry out the requirements of the department of student health. In addition to the gymnasium exercises, inter-class and inter-school competitions are arranged.

A gymnasium exclusively for women is located on the fourth floor of the Margaret Morrison Carnegie School.

BUREAU OF RECOMMENDATIONS

A very considerable number of the students in the Carnegie Institute of Technology are young men and women whose means are outstripped by their ambitions. They want a technical education; and when their financial resources are inadequate, they are willing to work for it. To help such students to support themselves, either wholly or in part, is the purpose of the Bureau of Recommendations. It is also instrumental in putting graduates in touch with positions in their profession.

Basing its recommendations upon a careful consideration of personality, practical experience, scholastic standing and need for work, the Bureau endeavors to secure for the students whatever positions are available in the manufacturing and business districts of the city. For the students in the day schools, temporary work during vacations is secured, as well as employment on Saturdays and in the evenings. Night students are assisted in finding work directly in line with the studies they pursue at the Institute.

During the year 1914-15, undergraduates and graduates were placed in positions through the efforts of the Bureau, at wages aggregating \$165,678.30. When business conditions are normal there is a constant demand for technically trained men from employers outside of, as well as those in, the Pittsburgh district.

Employment for women students who wish it is found by the special bureau in the office of the Margaret Morrison Carnegie School.

GEOGRAPHICAL DISTRIBUTION OF STUDENTS

The registration records for 1915-16 show that 40 states and 19 foreign countries are represented in the student body, the distribution being as follows:

California.....	8	Texas.....	6
Colorado.....	7	Vermont.....	2
Connecticut.....	40	Virginia.....	12
Delaware.....	2	Washington.....	8
District of Columbia.....	12	West Virginia.....	53
Florida.....	2	Wisconsin.....	5
Illinois.....	16	Wyoming.....	1
Indiana.....	26		
Iowa.....	7		3386
Kansas.....	4		
Kentucky.....	3		
Louisiana.....	2		
Maine.....	5		
Maryland.....	31		
Massachusetts.....	25		
Michigan.....	18		
Minnesota.....	10		
Mississippi.....	1		
Missouri.....	8		
Montana.....	3		
Nebraska.....	5		
New Hampshire.....	5		
New Jersey.....	18		
New York.....	135		
North Carolina.....	9		
Ohio.....	179		
Oklahoma.....	2		
Oregon.....	2		
Pennsylvania.....	607		
Pittsburgh District.....	2096		
Rhode Island.....	1		
South Carolina.....	5		
South Dakota.....	1		
Tennessee.....	4		

FOREIGN COUNTRIES

Austria.....	1
Brazil.....	3
British West Indies.....	2
Canada.....	12
China.....	1
Cuba.....	3
Denmark.....	2
Germany.....	2
Greece.....	2
India.....	1
Italy.....	1
Japan.....	3
Norway.....	1
Phillippine Islands.....	4
Poland.....	1
Russia.....	2
Scotland.....	1
Serbia.....	1
Sweden.....	3
	46
Total.....	3432

DEPARTMENT OF STUDENT HEALTH

Efficient scholastic work is so vitally dependent upon good health that the Institute has established a department of student health, the staff of which consists of a supervisor, two resident physicians, four athletic instructors, and several consulting physicians. The office of the department is located in mid-campus.

Five means are employed by the department in its work, (a) a medical and physical examination of every new student in order that suggestions may be given for the remedying of any defects that be found, (b) provision for proper food, which is secured by the



NIGHT VIEW OF THE WEST END OF THE CAMPUS

Institute's operating the student restaurant, described on page 21; (c) supervised physical training; (d) lecture courses on foods, their value, their preparation, their utilization; on personal and sex hygiene; on first aid so the injured, etc.; (e) periodical visits to students in their rooms by field workers of the department.

In cases of illness at dormitories, boarding, club or fraternity houses, a committee, recruited from the wives of the faculty, visits the students. Parents are notified in event of serious illness.

MR. CARNEGIE'S BENEFACTIONS IN PITTSBURGH

Carnegie Institute and Library (Main Building).....	\$11,500,000.00
Carnegie Institute of Technology.....	13,500,000.00
Carnegie Hero Fund Commission.....	5,000,000.00
Relief Fund for Employees in Carnegie Steel Works....	4,000,000.00
Libraries of Homestead, Duquesne and Braddock.....	1,650,000.00
Carnegie Library of Allegheny.....	480,000.00
Branch Libraries in Pittsburgh.....	533,832.58
Libraries in Suburbs.....	450,000.00
Incidental gifts.....	200,000.00

\$36,709,832.58

GRADUATES—BY COURSES

The statistics below give the graduates by courses for the first eight classes to be graduated, 1908 to 1915:

SCHOOL OF APPLIED SCIENCE	Day	Night	Total
Chemical Engineering.....	40	4	44
Civil Engineering.....	89	33	122
Commercial Engineering.....	26	1	27
Electrical Engineering.....	98	17	115
Mechanical Engineering.....	102	25	127
Metallurgical Engineering.....	44	12	56
Mining Engineering.....	11	—	11
Sanitary Engineering.....	5	—	5
Master of Science.....	1	—	1
Total.....	416	92	508
SCHOOL OF APPLIED DESIGN	Day	Night	Total
Architecture.....	39	2	41
Decoration.....	11	—	11
Illustration.....	9	—	9
Normal Art.....	3	—	3
Painting.....	1	—	1
Total.....	63	2	65

MARGARET MORRISON CARNEGIE SCHOOL

Day Courses

Costume Economics.....	71
General Science.....	5
Home Arts & Crafts.....	5
Household Economics.....	134
Secretarial.....	63
Social Work.....	2

280

Night Courses

Bookkeeping.....	26
Cooking.....	59
Dressmaking.....	43
Millinery.....	38
Sewing.....	7
Stenography.....	26
Costume Design.....	2
Home Arts & Crafts.....	5

206

Total.....**486**

SCHOOL OF APPLIED INDUSTRIES

Day Courses

Building Construction.....	26
Electrical Equipment & Construction.....	35
Machine Construction.....	138
Power Machinery Operation.....	11
Teachers' Course in Industrial Training.....	15

225

Night Courses

Building Trades.....	27
Chemistry of Materials.....	3
Electric Wiring.....	28
Forging and Foundry.....	4
House and Sign Painting.....	8
Machinery Trades.....	35
Mechanical Drafting.....	34
Pattern Making.....	2
Plumbing.....	25
Sheet Metal and Cornice Work.....	12
Stationary Engineering.....	14
Teachers' Course in Industrial Training.....	1
Telephony.....	3
	<hr/>
	176
Total.....	<hr/>
	401
	<hr/>
Duplications due to graduation in two courses in different years	1460
	<hr/>
	52
	<hr/>
Grand Total.....	1408

THE COST OF A COLLEGE YEAR

It is not advisable, as a general rule, for a student non-resident in Pittsburgh to enter one of the regular day courses without fairly certain means of meeting expenses for the first year. As beginnings are proverbially difficult, it is essential that a student's entire time and thought at the start of his course should be devoted to adjusting himself satisfactorily to the college work. To be obliged to face immediately the problem of self-support, in whole or in part, is to assume a load that handicaps one's scholastic record very considerably. The cost of a year's study naturally varies with individuals. With economy, it may show a total as low as \$350. Many students go through comfortably for \$400, all expenses included. A distribution of the expense items in the average case may be given as follows:

Fees.....	\$ 50.
Books and supplies.....	30.
Dormitory room for year.....	68.
Board at Institute restaurant, 36 weeks.....	126.
Clothes, laundry and incidentals.....	76.
	<hr/>
	\$350.

This low expense rate is principally due to the small fees, which are nominal compared with those in other institutions, and are made possible by the liberal endowment.

GENERAL INFORMATION

THE "ALMA MATER" SONG

Words by CHARLES J. TAYLOR.

Tune, "Austrian Hymn."

*Here where spangled wildernesses
Robed the fountains of the west,
Where the savage strife and stresses
Brought the settlers' crimson quest;
Land of legend, glory, graces,
Gypsy tide and toiling shore,
'Mid thy hilltops Alma Mater
Stands enthroned forevermore.
Hail Carnegie! Alma Mater—
Stand enthroned forevermore!*

*Here was heard the musket's rattle,
Round us rolled the thralling drum—
All is hushed, no more they startle,
Low we hear sweet labor's hum,
Art and science rule our battle,
In their pathway honor lies.
Hail! Carnegie! Alma Mater—
Show the way that truth may rise!
Hail! Carnegie! Alma Mater—
Show the way that truth may rise.*

*Show the way—arouse, awaken
Bear aloft thy beacon bright,
That our minds be ever taken,
Unto learning, into light.
Stand in daytime's storm unshaken,
Guide through storm of deepest night
Hail! Carnegie! Alma Mater—
Stand for progress, peace and right!
Hail! Carnegie! Alma Mater—
Stand for progress, peace and right!*



ONE OF THE CHEERING FORMATIONS BETWEEN THE HALVES
OF A FOOTBALL GAME

Student Organizations

SCHOOLS OF APPLIED SCIENCE, DESIGN AND INDUSTRIES

Technical Societies. (1) Tech Architectural Club (men); (2) Tech Design Club (women); (3) Carnegie Mechanical Engineering Society; (4) Crucible Club; (5) Fulcrum Club; (6) Mho Club; (7) Civil Engineering Society; (8) Craftsmen Club; (9) Mechanics' Club; (10) Wireless Club; (11) Tech Studio Club; (12) Radio Club; (13) The Graphica; (14) Avo Club.

Territorial Clubs. (1) New England Club; (2) Southern Club; (3) New York State Club.

General. Seannachie.

Musical Clubs. (1) Carnegie Musical Clubs, consisting of the Glee and Mandolin Clubs, sixty members; (2) C. I. T. Band, twenty pieces; (3) Choral Club, 50 members.

Publications. (1) The Tartan; (2) The Thistle; (3) The Puppet; (4) The Bagpipe.

Athletic Associations. Varsity, inter-school and inter-class teams in (1) Football; (2) Baseball; (3) Basketball; (4) Track; (5) Tennis.

Fraternities. (1) Pan Hellenic Club; (2) Sigma Tau; (3) Sigma Rho; (4) Beta Theta Epsilon; (5) Xi Sigma Upsilon; (6) Theta Xi, Pi Chapter; (7) Woodlawn Club; (8) Zeta Lambda Epsilon; (9) Delta Skull; (10) Opheleum; (11) Rho Epsilon; (12) Delta Phi.

The athletic activities, and some of the non-athletic organizations, are financed by each day student paying, at the time of registration, a students' activities fee of \$5, and each night student \$3.

MARGARET MORRISON CARNEGIE SCHOOL

General. (1) Margaret Morrison Carnegie School Guild; (2) Dramatic Club; (3) Glee Club; (4) Pan Hellenic Society; (5) Athletic Association.

Sororities. (1) Delta Theta; (2) Theta Sigma; (3) Alpha Sigma Pi; (4) Delta Delta; (5) Alpha Delta; (6) Alpha Psi.

STYLE OF ARCHITECTURE

The architectural treatment of the buildings of the Carnegie Institute of Technology has been simple, dignified, and essentially serviceable; while the construction throughout has been fireproof and in accordance with the most modern practice.

The original competition for the selection of an architect was awarded to Palmer and Hornbostel of New York on October 26, 1904; and Henry Hornbostel has been the architect of the different buildings that have since been erected. Other notable commissions of his have been the New York State Education Building at Albany; the City Hall of Oakland, California; Soldiers' and Sailors' Memorial of Allegheny County, Pittsburgh, Pa.; Northwestern University Dormitories, Evanston, Illinois; and Emory University, Atlanta, Georgia. Mr. Hornbostel is president of the American Society of Beaux Arts Architects, and has been patron of the School of Applied Design from its beginning.



CARNEGIE INSTITUTE AND LIBRARY—MAIN BUILDING

Carnegie Institute and Library

FOUNDATION AND ORGANIZATION



ERECTED in 1894-95, remodelled and enlarged in 1906-07. Cost \$6,000,000. Frontage, 400 feet, depth 600. Architects, Alden and Harlow, of Pittsburgh. A massive structure of the Italian Renaissance type of architecture, covering approximately six acres. The bronze figures of heroic size at the east entrance are Galileo and Michelangelo; those at the west entrance, Shakespeare and Bach. There are also large bronze groups representing Art, Science, Music, and Literature above the corner piers of the roof, J. Massey Rhind being the sculptor. The building provides handsome and spacious quarters for the Library, Art Galleries, Museum, Music and Lecture Halls. The Library was the original unit around which the larger Institute structure has been erected.

"The original purpose of Mr. Andrew Carnegie," to quote from the Memorial of the Celebration of The Carnegie Institute, April 11,

12, 13, 1907, published by the Trustees, "was to found a great library for the use of the community in which his business triumphs had been won. Provision was made for a board of trustees, eighteen in number, nine of whom were chosen by Mr. Carnegie with the power to elect their successors, the other nine being the official representatives of The City of Pittsburgh. In 1890 Mr. Carnegie gave to this Board one million dollars for the erection of a central building, with branch library buildings; and from time to time he has made large additions to that sum. The Board proceeded to the erection of the central building, which was completed and first dedicated on November 5th, 1895.

"On the night of the dedication, when no other thought than the reading of books had come into the minds of his auditors, Mr. Carnegie announced that he had determined to inaugurate in association with the Library a Department of Fine Arts, and a Museum, which should find their permanent home within the same building; and he provided a fund of one million dollars for their support.

"For the administration of these new departments which he described as 'wise extravagances' Mr. Carnegie named a Board consisting of eighteen citizens of Pittsburgh, and added to the number all the members of the Board of Trustees of the Carnegie Library, making a strong and resourceful organization of thirty-six representative men, who, after first choosing for their designation in 1896 the title of 'The Board of Trustees of the Carnegie Fine Arts and Museum Collection Fund,' later on, in 1898, exchanged this cumbersome name for that of 'The Board of Trustees of the Carnegie Institute.' In 1903 Mr. Carnegie provided additional funds and placed them in the hands of this larger Board for the erection, maintenance, and control of the Carnegie Technical Schools. Subsequently, he gave it special funds for the operation of the Hall of Music and for the maintenance of a Training School for Children's Librarians.

"It was not long before the capacity of the original building was overtaxed by the rapid growth of its collections, and as soon as this situation was made known to him, Mr. Carnegie gave his trustees, in addition to the \$1,120,000 for the first building, \$5,000,000 for its enlargement, and \$2,500,000 for the Technical School buildings, besides \$9,000,000 as an endowment fund for the Carnegie Institute, and about \$500,000 for branch libraries, making a total expenditure on his part, at the moment of the second dedication, in 1907, not counting special sums for exploration and for objects purchased for the Art Gallery and the Museum, of \$18,120,000.



HALL OF SCULPTURE

"The whole institution embraces the main Library and its branches, under control of the Board of Trustees of the Carnegie Library and maintained by the city of Pittsburgh, and the Department of Fine Arts, the Department of the Museum, the Hall of Music, the Training School for Children's Librarians, and, in separate buildings, the Carnegie Institute of Technology, under control of the Board of Trustees of the Carnegie Institute, and maintained by Mr. Carnegie's endowments. The original buildings was enlarged expressly in order that these departments might have room together for their unrestricted growth, and, by Mr. Carnegie's direction, perpetual assignment has been given to them within the new structure, a fair share of the cost of maintenance and operation being paid by the Trustees of the Carnegie Institute out of the endowment income. The institution comprises, therefore, a noble and harmonious group of creations, each one of which seems to be natural associate and supplement of all the others, housed (excepting the Institute of Technology, which is in adjacent halls), in the building that now stands among the world's great pieces of architecture, and all administered by the two Boards of Trustees with a single purpose of public usefulness."

THE CARNEGIE LIBRARY OF PITTSBURGH

Librarian, Harrison W. Craver. Open 9:00 A. M. to 10:00 P. M. daily. Sunday 2:00 P. M. to 6:00 P. M. Closed: July 4th, Christmas Day and Memorial Day.

The Carnegie Library of Pittsburgh is a free reference and circulating library of 350,000 volumes maintained by the City of Pittsburgh at an annual cost of about \$200,000. It comprises the Central Library, which is situated at the entrance to Schenley Park, and eight branch libraries located in different sections of the city. There are over one hundred other library agencies, such as library stations and collections of books deposited in districts removed from library centers.

The Lending Room is on the first floor of the Library. There are over 60,000 volumes in the lending collection and 12,000 are on open shelves.

The Reference Department is on the second floor. Ten thousand reference volumes are on the shelves around the walls, and all the books in the Library are available for use in this room. Rooms for quiet study may be had on application and assistance is given at all times to readers coming in person and to those who telephone or write for information.

The Periodical Room on the same floor contains the current numbers of 1,038 magazines and 118 newspapers.

The Technology Department on the third floor is the first department established in any municipal library in the United States solely for work with scientific and technical literature. It is under the charge of graduates of scientific institutions, who give personal assistance to those seeking information along technical lines. The book collection contains 60,000 volumes. Four hundred scientific, technical and trade journals and one hundred and fifty house organs are received regularly and the bound files of three hundred of these are kept for reference purposes. So far as possible all important technical books in French, German and English are secured for this department.

THE CARNEGIE MUSEUM

Director, Dr. W. J. Holland. Open Week-days from 10:00 A. M. to 10:00 P. M. Sundays 2:00 P. M. to 6:00 P. M. Closed on Fourth of July, Christmas and Memorial Day.

First Floor. The Coin and Gem Room contains the Heinz collection of Watches and Canes, the Lewis collection of Gems and the Coin, Jade and Crystal collections.



ANCIENT EGYPTIAN BOAT FOUND IN A CRYPT AT DAHSHUR, EGYPT,
WHERE IT HAD BEEN PLACED IN 4500 B. C.

The Gallery of Geology and Mineralogy contains the richest collection of Pennsylvania minerals in existence; the Jeffris collection; Relief Maps of Pittsburgh, and collections illustrating the use of minerals in the manufacture of steel, iron, etc.

The Gallery of Paleontology contains the Fossil Mammals, the *dinohyus*, specimens illustrating the evolution of the horse, the mastodom, Fossil Camels, the Irish Elk, etc.

The Gallery of Fossil Reptiles and Fishes contains the *Diplo-docus*, the giant lizard found in Wyoming—this is the largest fossil in any museum, being $84\frac{1}{2}$ feet long and 14 feet high.

The Gallery of Useful Arts contains Ivories, Pottery, Glass Costumes, Arms, Carved Wood, Models illustrating the history of transportation, a collection of musical instruments and examples of the art of printing. The Gallery of Ornithology; the Gallery of Reptiles.

Second Floor. The Hall of Mammals; the Hall of Botany; each contains many specimens of interest to students, especially to students of design.

Third Floor. The Archaeological and Ethnological collections contain the Indian groups, collections of Indian baskets, Costumes, Pottery, Stone Implements, etc., antiques from Egypt, Etruscan Pottery, etc.

THE DEPARTMENT OF FINE ARTS

Director, John W. Beatty. Open week days 10:00 A. M. to 10:00 P. M. Sundays 2:00 P. M. to 5:00 P. M. Closed on Fourth of July, Christmas and Memorial Days.

The permanent collections include an important chronological collection of architectural casts, an excellent collection of paintings, collections of drawings, bronzes, sculptural casts, Japanese prints, etchings, etc.

The department presents each spring an international exhibition of modern paintings which attracts the work of the best European and American painters. Many exhibitions of paintings, applied arts, prints or sculptures are held during the year, the galleries being the scene of exhibitions under the auspices of The Art Society, The Associated Artists of Pittsburgh, The Pittsburgh Architectural Club, The Pittsburgh Camera Club, The Pittsburgh Etching Club, The Duquesne Camera Club, etc.

An important contribution to the field of mural painting "The Spirit of Pittsburgh" by the late John W. Alexander, decorates the stairway entering the museum.

The use of the galleries and library of the department is available for students. Permits to sketch, or to copy, are obtained from the office of the Director of Fine Arts.

CARNEGIE MUSIC AND LECTURE HALLS

Music Hall. On Saturday evening at 8:00 P. M. and on Sunday at 4:00 P. M. organ recitals are given by Charles Heinroth. The recitals are free to the public. The Hall seats two thousand. Entrance on Forbes Street.

The Music Hall is used by the Institute of Technology for the Commencement and "Carnegie Day" exercises, and for the students' musical entertainments, etc.

The Elmendorf, the University Extension, the Burton Holmes, the concerts and lectures of the Art Society, and various lecture courses and concerts are held in the Music Hall.

Lecture Hall. Entrance on the Grant Boulevard, at the rear of the Institute. Seats 600. In this hall there are held many free lectures on scientific and cultural subjects under the auspices of the Academy of Science and Art of Pittsburgh, and other societies.

